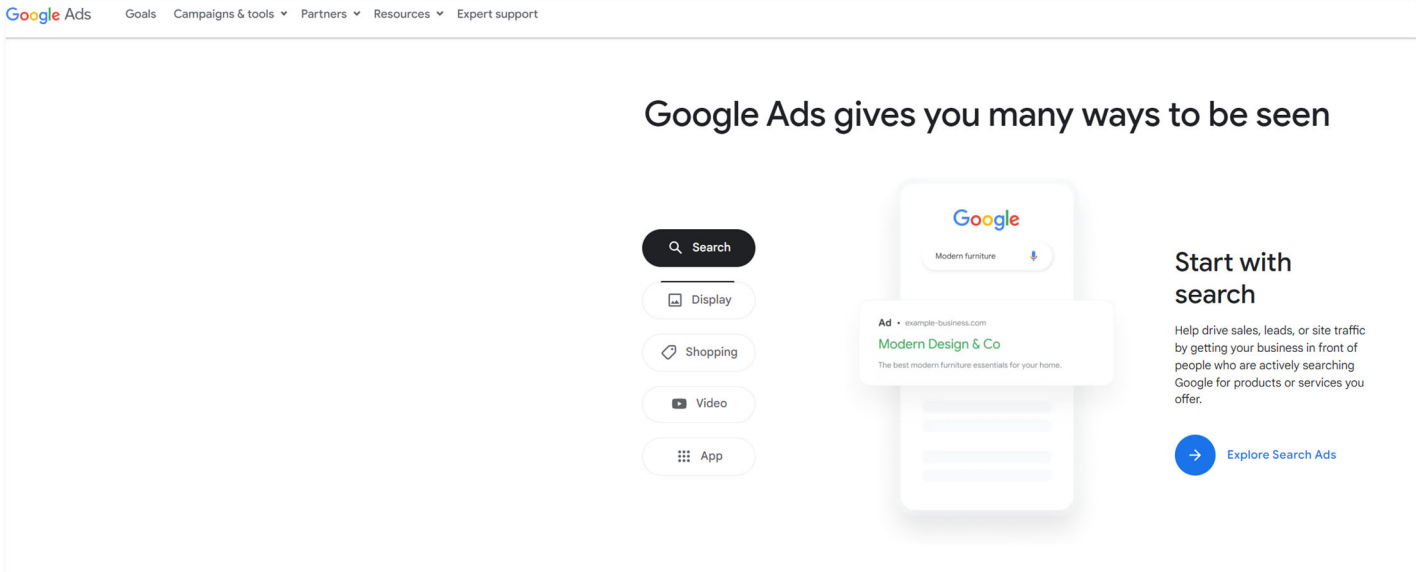


EXHIBIT I

US10789626	Google Ads (“Accused Instrumentalities”)
<p>1. A method, comprising: generating, by a server computer, a deep-linked ad utilizing a universal variable map stored in a data store and accessible by the server computer, the universal variable map linking programming variables across multiple sites on the Internet and applications;</p>	<p>The Accused Instrumentalities practice a method, comprising generating, by a server computer (e.g., Google web server), a deep-linked ad utilizing a universal variable map (e.g., Google’s indexing) stored in a data store and accessible by the server computer, the universal variable map linking programming variables across multiple sites on the Internet and applications.</p> <p>As shown below, the Accused Instrumentalities, using Google’s web servers, generate and serve deep-linked ads.</p>  <p>The screenshot shows the Google Ads homepage. At the top, there's a navigation bar with 'Google Ads' and links for 'Goals', 'Campaigns & tools', 'Partners', 'Resources', and 'Expert support'. The main heading is 'Google Ads gives you many ways to be seen'. Below this, there's a vertical stack of buttons: 'Search', 'Display', 'Shopping', 'Video', and 'App'. To the right of these buttons is a large graphic of a smartphone displaying a Google search result for 'Modern furniture' with an ad for 'Modern Design & Co'. To the right of the smartphone is a section titled 'Start with search' with a sub-headline 'Help drive sales, leads, or site traffic by getting your business in front of people who are actively searching Google for products or services you offer.' and a button 'Explore Search Ads'.</p> <p>https://ads.google.com/home/</p> <p>Traditional Ad Serving is a service provided to publishers for the delivery of Ads from Google’s web servers to Target Properties based on criteria selected by those publishers and the advertisers and agencies advertising on the Target Properties.</p>

<https://support.google.com/admanager/answer/6021064?hl=en>

About deep links

Deep links send mobile device users directly to relevant pages in your app rather than your website. Users click on ads and go directly to your app pages. You can use deep links in many Google Ads products, including App campaigns for engagement, App dynamic remarketing, and Search, Shopping, and Display campaigns.

How does deep linking work?



Benefits

- **Greater security:** App Links and Universal Links give you peace of mind that no other app can use your links. Other companies can't claim your link, so they can't send traffic to their own app (as can be done with custom schemes).
- **Relevant page results:** You can direct customers and potential customers to relevant pages within your app, rather than browser or mobile-web pages. App Links and Universal Links use the same URL as your web links, so if your app can't open, instead of being shown an error page, users will be taken to the mobile site landing page.
- **Seamless user experience:** The more seamless integration for your app users improves user experience, increases conversions, and improves customer loyalty.

<https://support.google.com/google-ads/answer/10023042>

Add and edit deep linking for App campaigns for engagement

When you're setting up a new App campaign for engagement, you need to add deep links to your ad groups so that the ads you create drive your users directly into relevant app pages.

Note: Your app developer should complete deep link setup before you add them to the App campaign for engagement. [Learn more about deep links](#)

Instructions for adding deep links

1. Sign in to your [Google Ads account](#) .
2. Follow the instructions on how to [Create an App campaign for engagement](#) through step 13.
3. For step 13, the Deeplink Suggestions feature of App campaigns for engagement will show you a list of deep links currently set up for your app.
4. Select or type the appropriate deep link in the field under "App URL".
5. Proceed with steps 14-17 in the instructions to complete the [creation of your App campaign for engagement](#).




<https://support.google.com/google-ads/answer/10024200?hl=en>

Deep link

A type of destination URL in an ad that takes people to a specific page in an app. The following types of deep links are supported by Google Ads:

- **Custom schemes:** Custom schemes are custom URIs you can create to link to any in-app content. If your ad shows on a mobile device with your app installed and a user clicks the link, it sends people directly to the content in your app.
- **App Links and Universal Links:** These links use your existing HTTP destination URL, such as www.example.com or www.example.com/product_1234. Tracking parameters are allowed for these links.

Note: Deep links are not automatically set up when you create your app, and they work differently on iOS and Android.

- [Learn about setting up custom schemes for Android apps](#) 
- [Learn more about Universal Links for iOS apps](#) 
- [Learn about setting up App Links for Android apps](#) 

<https://support.google.com/google-ads/answer/6046977>

	Description	How it works	Which Google Ads products are they compatible with?
App Links (Android)	These links use your existing HTTP destination URLs, such as www.example.com or www.example.com/product_1234 , and take users who have your Android app installed to the in-app content you specify.	Visit our developer website to learn more about App Links for Android apps.	<ul style="list-style-type: none"> • Search • Display • Shopping • App engagement campaigns • App dynamic remarketing campaigns
Universal Links (iOS)	These links use your existing HTTP destination URLs, such as www.example.com or www.example.com/product_1234 , and take users who have your iOS app installed to the in-app content you specify.	Visit the developer website to learn more about Universal Links for iOS apps.	<ul style="list-style-type: none"> • Search • Display • Shopping • App engagement campaigns • App dynamic remarketing campaigns
Custom schemes	Create Custom URIs to link to any in-app content you choose. Note: If the user doesn't have your app installed, custom schemes will lead to an error page.	Visit the developer website to learn more about Custom schemes .	<ul style="list-style-type: none"> • App engagement campaigns • App dynamic remarketing campaigns

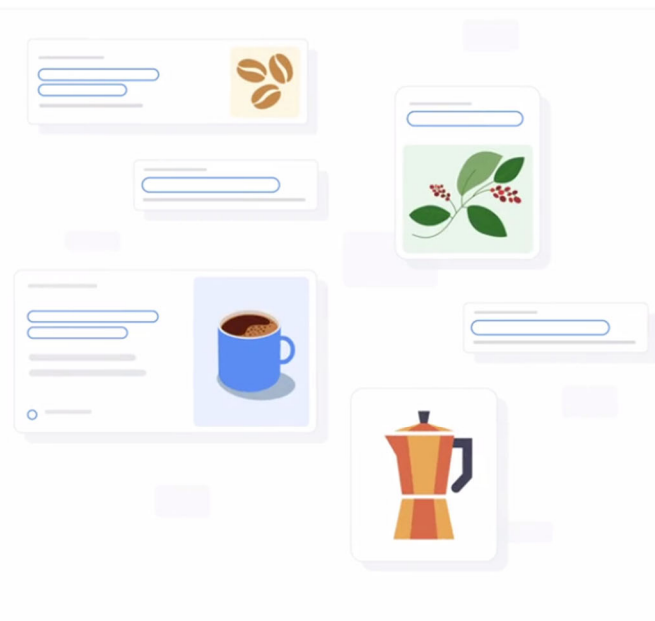
<https://support.google.com/google-ads/answer/10023042>

<https://support.google.com/google-ads/answer/10024200?hl=en>

The server generates the ad utilizing a universal variable map linking programming variables across multiple sites on the Internet and applications. As shown below, for example, Google's search index maps the web by categorizing information using Google's Search index. The index links programming variables (e.g., variables related to information on the page).

We continuously map the web
and other sources to connect
you to the most relevant,
helpful information.

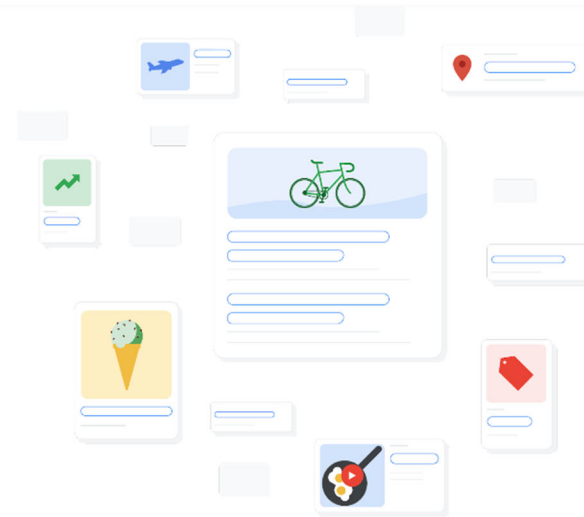
[Learn more about how Search works](#)



<https://www.google.com/search/howsearchworks/>

How Google Search organizes information

When you Search, Google looks through hundreds of billions of webpages and other content stored in our Search index to find helpful information — more information than all of the libraries of the world.



Finding information by crawling

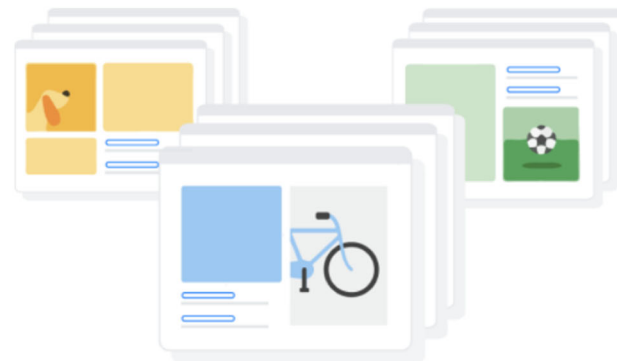
Most of our Search index is built through the work of software known as crawlers. These automatically visit publicly accessible webpages and follow links on those pages, much like you would if you were browsing content on the web. They go from page to page and store information about what they find on these pages and other publicly-accessible content in Google's Search index.



<https://www.google.com/search/howsearchworks/how-search-works/organizing-information/>

Organizing information by indexing

When crawlers find a webpage, our systems render the content of the page, just as a browser does. We take note of key signals — from keywords to website freshness — and we keep track of it all in the Search index.



<https://www.google.com/search/howsearchworks/how-search-works/organizing-information/>

To further refine search results, Google uses a variety of categorization techniques to classify web pages based on their content. For example, Google can distinguish between different types of content, such as images, videos, and text, and can also categorize pages based on their topics or themes. This categorization allows Google to provide users with more targeted and relevant results, such as by displaying images or videos related to their search query.

Overall, Google's ability to quickly and accurately organize and categorize vast amounts of information is what sets it apart from other search engines. By using sophisticated algorithms to analyze and index web pages, and by employing categorization techniques to refine search results, Google can provide users with the most relevant and useful information available on the web.

<https://www.linkedin.com/pulse/behind-scenes-how-googles-search-index-powers-worlds-strickland-/?trk=pulse-article>

Index

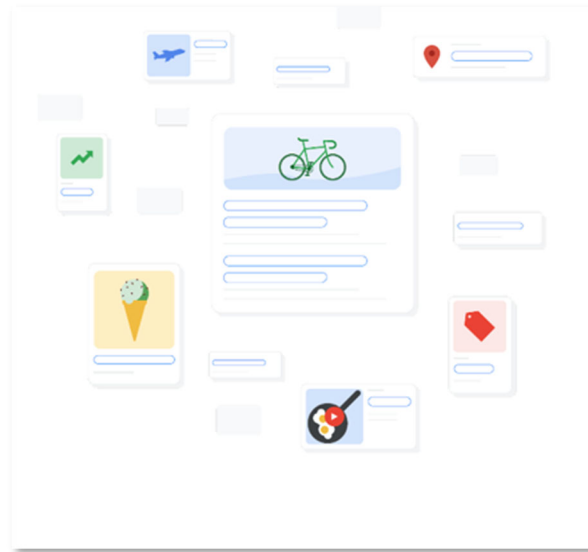
A page is *indexed* by Google if it has been visited by the Google crawler ("Googlebot"), analyzed for content and meaning, and stored in the Google index. Indexed pages can be shown in Google Search results (if they follow the [Google Search Essentials](#)). While most pages are crawled before indexing, Google may also index pages without access to their content (for example, if a page is blocked by a [robots.txt](#) directive). [Learn more](#).



Give feedback about this article

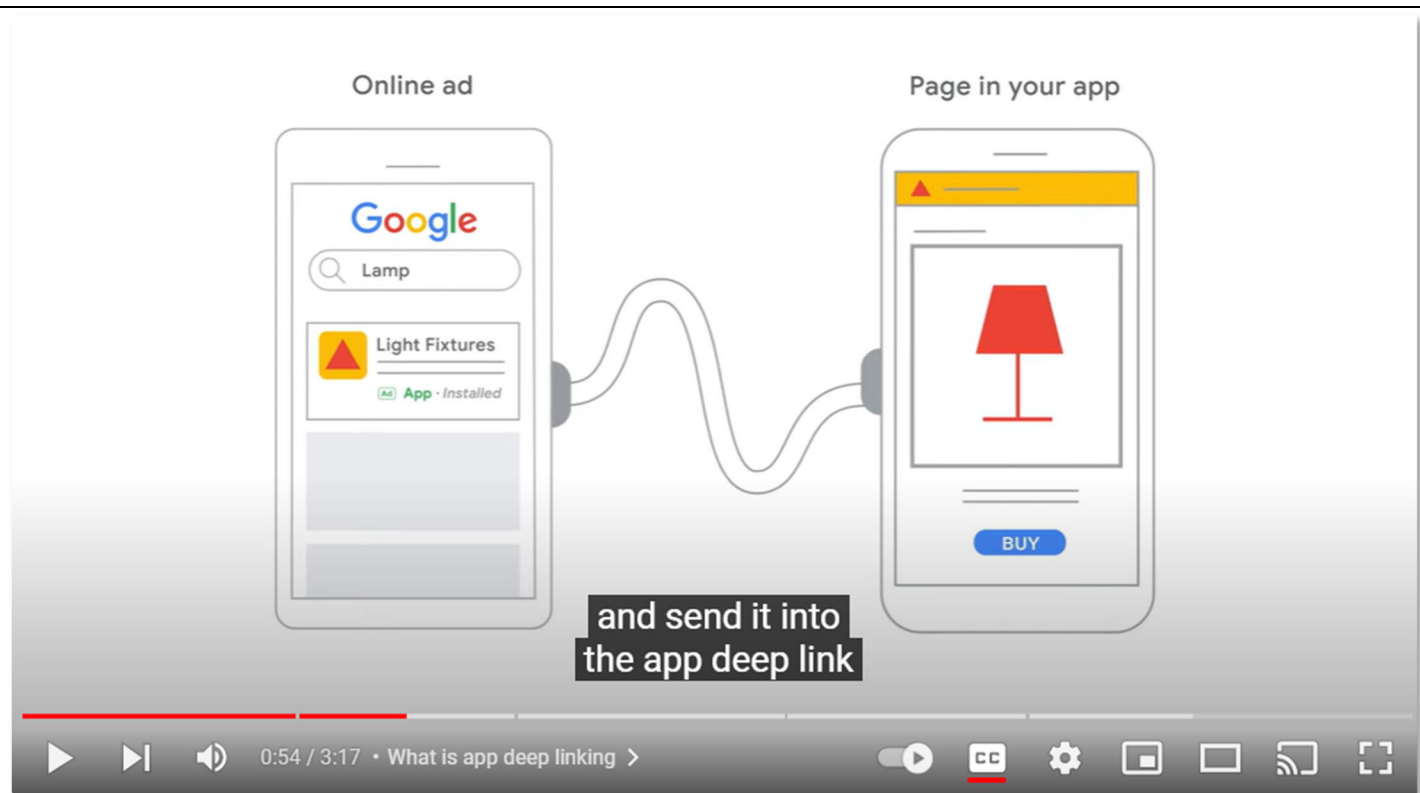
https://support.google.com/webmasters/answer/7643011?hl=en&ref_topic=7508311&sjid=2031161137716756779-NA

As an example, various portions of websites include programming variables that are used to display or otherwise indicate information (e.g., information in text fields, image fields, input fields, etc.).



<https://www.google.com/search/howsearchworks/how-search-works/organizing-information/>

Apps likewise include programming variables.



https://www.youtube.com/watch?v=60Pk4767aFQ&ab_channel=GoogleAds

As one of many exemplary examples, the Google Search index may link programming variables associated with a travel departure location, which may be used to generate a deep-linked ad.

Google flights from sfo to lax

Flights Round trip Today Tomorrow Cheap Jetblue Images United Southwest All filters Tools SafeSearch

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Southwest Airlines®
https://www.southwest.com

One-Way as Low as \$45 to LAX - SFO to LAX Flights
First Travel Date Available: 10/11/2023. Seats/dates/mkts. Lmt'd; restr/excl apply. Looking For Low Fares & Flexible With Travel Dates? Shop Our Low Fare Calendar Today!
Low Fare Calendar · Flights From The Bay Area · Southwest® Snow Getaways

People also search for

- san francisco to los angeles flight time
- southwest sfo to lax
- sfo to lax round trip
- sfo to las vegas
- sfo to lax today
- san francisco to los angeles distance
- sfo to lax one-way
- sfo to lax united

Flights to Los Angeles : Flights Flight Status Airports

Flight prices :

San Francisco, CA (SFO) Los Angeles, CA (LAX)

Sat, Oct 28 Sun, Oct 29

Economy Round trip Nonstop Less emissions

Oct Nov

5 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 1
i M T W T F S S M T W T F S S M T W T F S S M T W T

Airline	Flight	Class	Time	Stops	Price
JetBlue	1h 31m	Nonstop			from \$90
Delta	1h 29m	Nonstop			from \$103
Alaska	1h 30m	Nonstop			from \$192
United	1h 31m+	Connecting			from \$196

Show flights →

Flight Status :

Tue, Sep 19 Wed, Sep 20 Thu, Sep 21 Fri, Sep 22

Time	Flight	Status	Destination
6:00 AM	AS 3439	ARRIVED	Los Angeles LAX
6:00 AM	DL 2841	ARRIVED	Los Angeles LAX

Show all flight updates →

<https://www.google.com/search?q=flights+from+sfo+to+lax>



FLIGHT | HOTEL | CAR | VACATIONS SPECIAL OFFERS RAPID REWARDS®



Low Fare Calendar

[Restrictions and exclusions apply. See all terms below.](#)

Search lowest fares by month

☒ Round trip ☐ One-way ☐ Multi-city

☒ Dollars ☐ Points

DEPART

San Francisco, CA

San Francisco, CA - SFO

DEPART MONTH

September 2023

PASSENGERS

1

Group travel (10+)

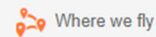
ARRIVE

Los Angeles, CA - L

Los Angeles, CA - LAX

RETURN MONTH

September 2023

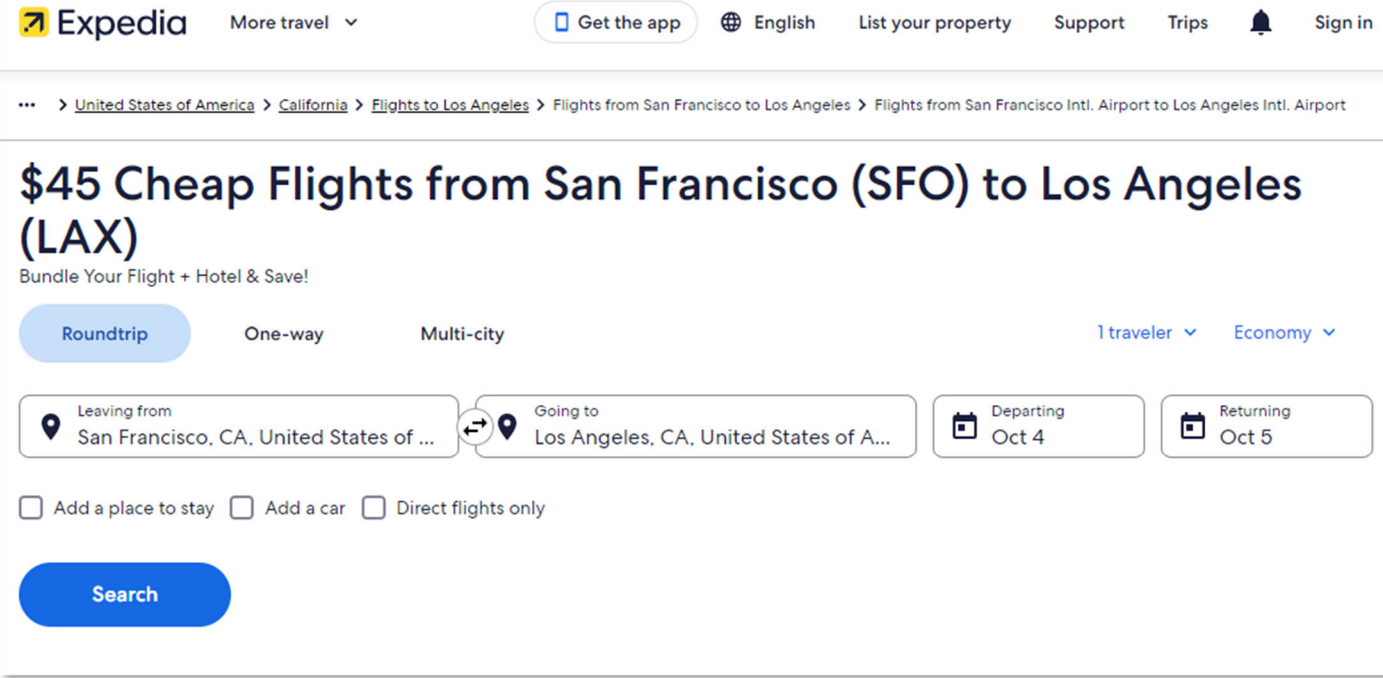


Now accepting reservations through June 03, 2024.

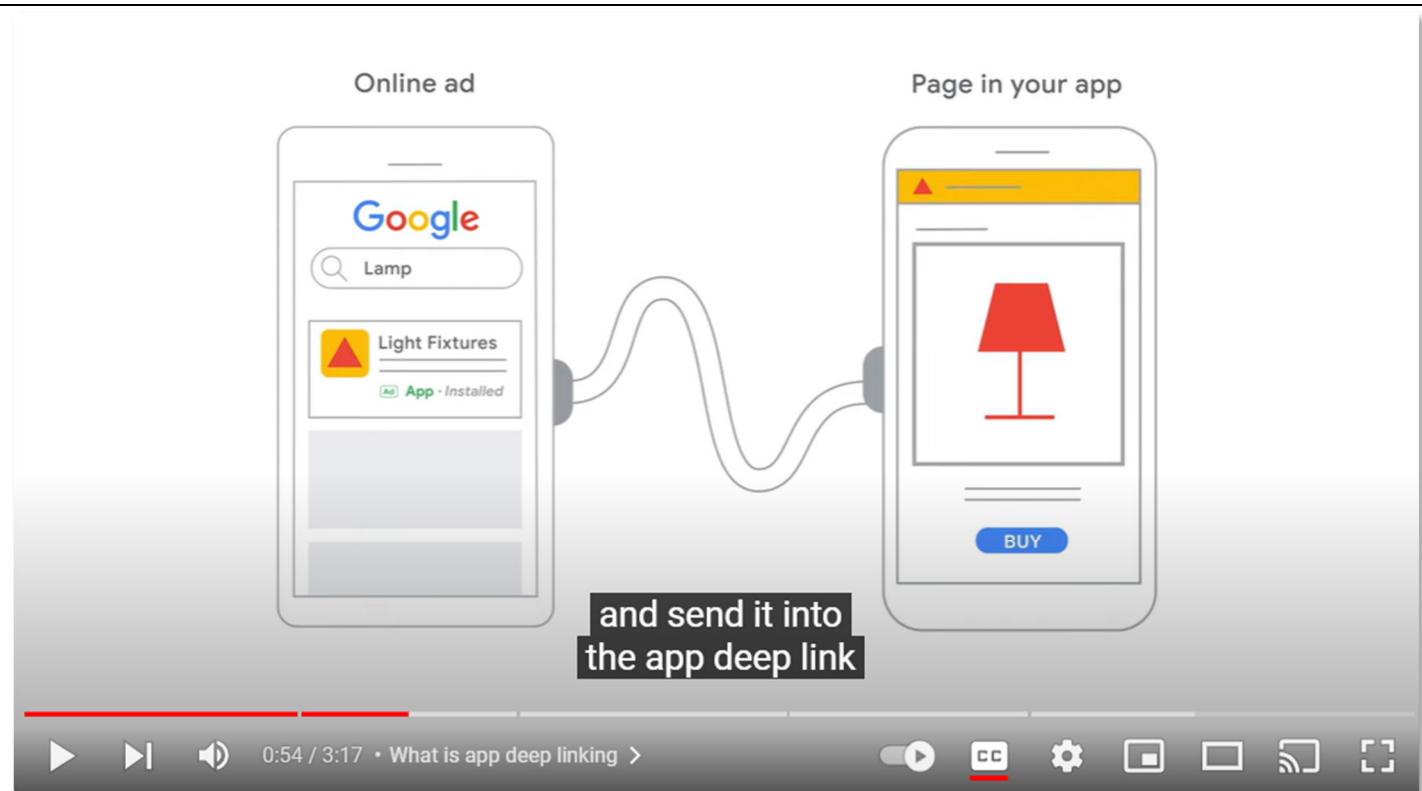


Search

https://www.southwest.com/air/low-fare-calendar/?lfma=LFMA2&mode=OD&originationAirportCode=SFO&destinationAirportCode=LAX&src=SRCH_go_cmp-1025167347_adg-56165908771_ad-595062284103_kwd-300236971871_dev-c_ext-prd-

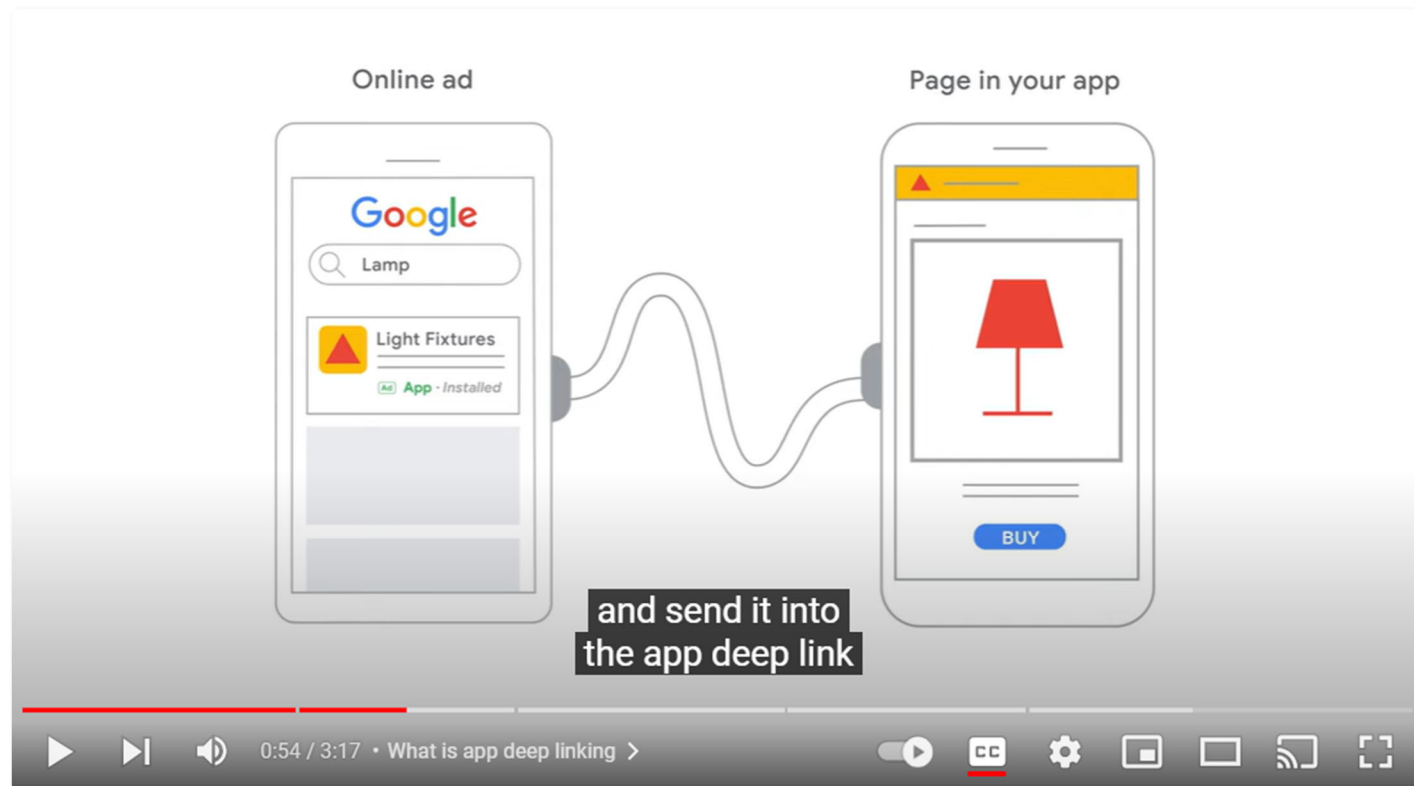
	 <p>https://www.expedia.com/lp/flights/sfo/lax/san-francisco-to-los-angeles</p>
<p>serving, by the server computer, the deep-linked ad through a first site or mobile application, the deep-linked ad linking a first set of programming variables of the first site on the</p>	<p>The Accused Instrumentalities practice a method of serving, by the server computer (e.g., Google web server), the deep-linked ad through a first site or mobile application (e.g., a browser or mobile browser, such as the Google Chrome web and mobile browsers, displaying the Google search page), the deep-linked ad linking a first set of programming variables of the first site on the Internet or the first mobile applications (e.g., the Google search page) with a second set of programming variables of a second site on the Internet or a second mobile application (e.g., the site or application associated with the deep-linked ad), the first set of programming variables being associated with the second set of programming variables in the universal variable map stored in the data store (e.g., linked or mapped using Google's index).</p> <p>Below are examples of deep-linked ads served via's Google search page:</p>

Internet or the first mobile applications with a second set of programming variables of a second site on the Internet or a second mobile application, the first set of programming variables being associated with the second set of programming variables in the universal variable map stored in the data store; and



https://www.youtube.com/watch?v=60Pk4767aFQ&ab_channel=GoogleAds

The deep-linked ad links a first set of programming variables of the first site on the Internet or the first mobile applications (e.g., programming variables of the Google search) with a second set of programming variables of a second site on the Internet or a second mobile application (e.g., programming variables of the ad target page), the first set of programming variables being associated with the second set of programming variables in the universal variable map stored in the data store (e.g., Google's index).



https://www.youtube.com/watch?v=60Pk4767aFQ&ab_channel=GoogleAds

Google flights from sfo to lax

Flights Round trip Today Tomorrow Cheap Jetblue Images United Southwest All filters Tools SafeSearch

Sponsored

Southwest Airlines®
https://www.southwest.com

One-Way as Low as \$45 to LAX - SFO to LAX Flights
First Travel Date Available: 10/11/2023. Seats/dates/mkts. Lmt'd; restr/excl apply. Looking For Low Fares & Flexible With Travel Dates? Shop Our Low Fare Calendar Today!
Low Fare Calendar · Flights From The Bay Area · Southwest® Snow Getaways

People also search for

- san francisco to los angeles flight time
- southwest sfo to lax
- sfo to lax round trip
- sfo to las vegas
- sfo to lax today
- san francisco to los angeles distance
- sfo to lax one-way
- sfo to lax united

Flights to Los Angeles : Flights Flight Status Airports

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Sat, Oct 28 Sun, Oct 29

Economy Round trip Nonstop Less emissions

Oct Nov

5 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 1
i M T W T F S S M T W T F S M T W T F S M T W T

Airline	Flight	Class	Time	Stops	Price
JetBlue	1h 31m	Nonstop			from \$90
Delta	1h 29m	Nonstop			from \$103
Alaska	1h 30m	Nonstop			from \$192
United	1h 31m+	Connecting			from \$196

Show flights →

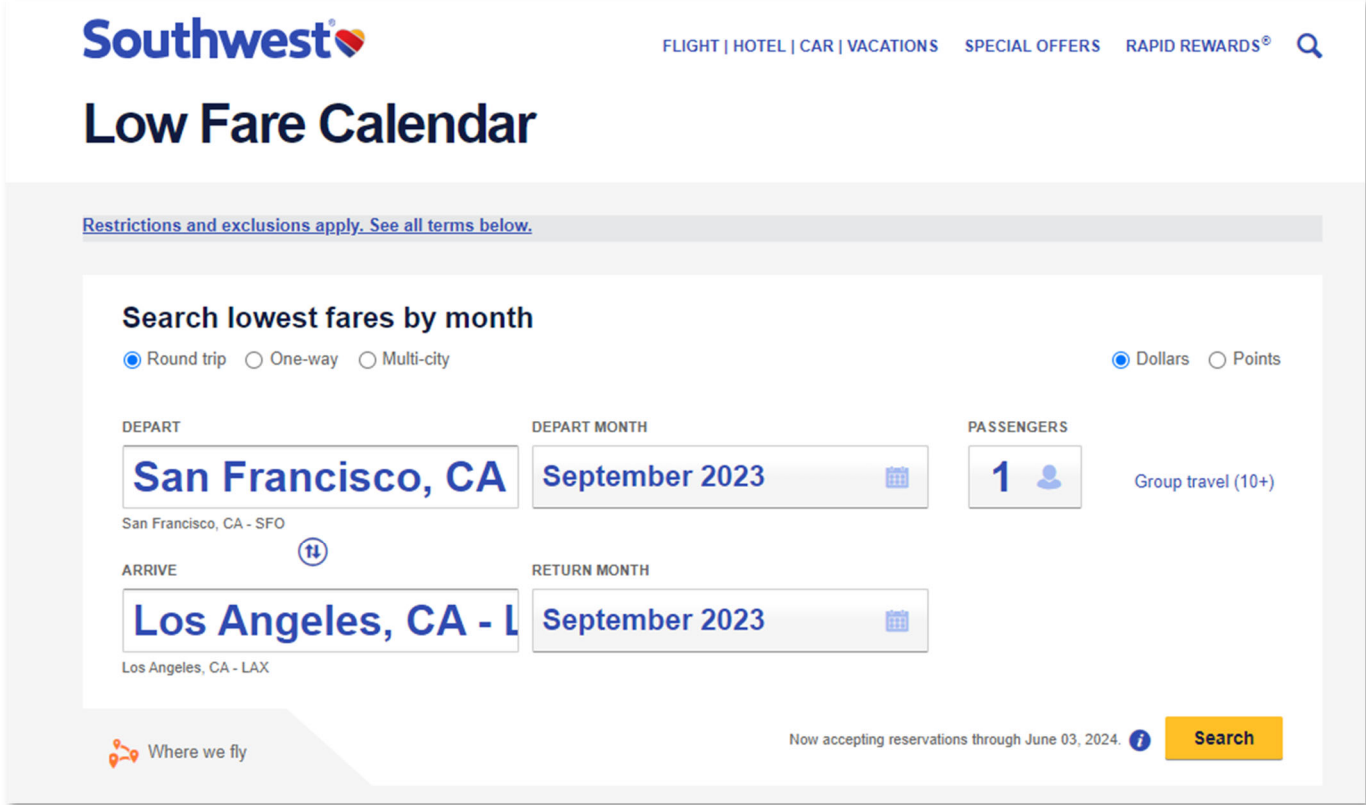
Flight Status :

Tue, Sep 19 Wed, Sep 20 Thu, Sep 21 Fri, Sep 22

Time	Flight	Status	Destination
6:00 AM	AS 3439	ARRIVED	Los Angeles LAX
6:00 AM	DL 2841	ARRIVED	Los Angeles LAX

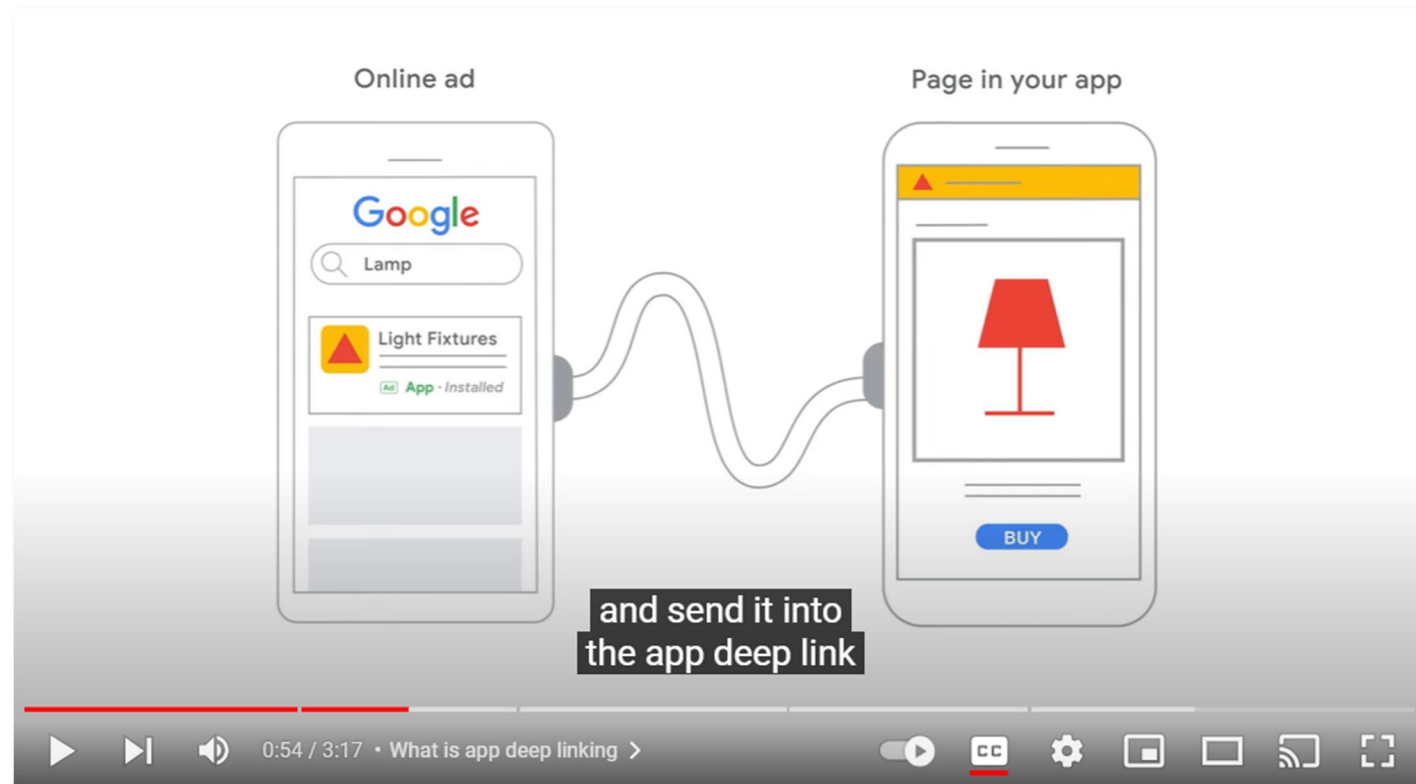
Show all flight updates →

<https://www.google.com/search?q=flights+from+sfo+to+lax>

	 <p>https://www.southwest.com/air/low-fare-calendar/?lfma=LFMA2&mode=OD&originationAirportCode=SFO&destinationAirportCode=LAX&src=SRCH_go_cmp-1025167347_adg-56165908771_ad-595062284103_kwd-300236971871_dev-c_ext- prd-</p>
in response to a user interacting with the deep-linked ad displayed on a user device through an instance of the first	The Accused Instrumentalities practice a method where in response to a user interacting with the deep-linked ad (e.g., a user clicking on the Google ad) displayed on a user device through an instance of the first site on the Internet or the first mobile application (e.g., a computer, smartphone, tablet, etc. displaying the Google search page): extracting, through the first site on the Internet or the first mobile application, values corresponding to the first set of programming variables (e.g., values related to a Google search that correspond to the programming variables on the Google search page).

site on the Internet or the first mobile application: extracting, through the first site on the Internet or the first mobile application, values corresponding to the first set of programming variables;

As an example as shown below, the values on the Google search page (e.g., “Lamp” and/or “Light Fixtures”) correspond to the first set of programming variables on the Google search page.



https://www.youtube.com/watch?v=60Pk4767aFQ&ab_channel=GoogleAds

Below are additional examples of the claimed values (e.g., “flights,” “from,” sfo,” “to,” and/or “lax”).

Google flights from sfo to lax

Flights Round trip Today Tomorrow Cheap Jetblue Images United Southwest All filters Tools SafeSearch

Sponsored

Southwest Airlines®
https://www.southwest.com

One-Way as Low as \$45 to LAX - SFO to LAX Flights
First Travel Date Available: 10/11/2023. Seats/dates/mkts. Lmtd; restr/excl apply. Looking For Low Fares & Flexible With Travel Dates? Shop Our Low Fare Calendar Today!
Low Fare Calendar · Flights From The Bay Area · Southwest® Snow Getaways

People also search for

- san francisco to los angeles flight time
- southwest sfo to lax
- sfo to lax round trip
- sfo to las vegas
- sfo to lax today
- san francisco to los angeles distance
- sfo to lax one-way
- sfo to lax united

Flights to Los Angeles : Flights Flight Status Airports

Flight prices :

San Francisco, CA (SFO) Los Angeles, CA (LAX)

Sat, Oct 28 Sun, Oct 29

Economy Round trip Nonstop Less emissions

Oct Nov

5 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 4 5 6 7 8 9 1
i M T W T F S S M T W T F S S M T W T F S S M T W T

Airline	Flight	Class	Time	Stops	Price
JetBlue	1h 31m	Nonstop			from \$90
Delta	1h 29m	Nonstop			from \$103
Alaska	1h 30m	Nonstop			from \$192
United	1h 31m+	Connecting			from \$196

Show flights →

Flight Status :

Tue, Sep 19 Wed, Sep 20 Thu, Sep 21 Fri, Sep 22

Time	Flight	Status	Destination
6:00 AM	AS 3439	ARRIVED	Los Angeles LAX
6:00 AM	DL 2841	ARRIVED	Los Angeles LAX

Show all flight updates →

<https://www.google.com/search?q=flights+from+sfo+to+lax>




The values are extracted in response to the user interaction of the deep linked ad (e.g., the values are used to serve the deep-linked page or site corresponding to the ad). In some examples, the interaction extracts the values via a URL of the deep-linked ad.

Deep link

A type of destination URL in an ad that takes people to a specific page in an app. The following types of deep links are supported by Google Ads:

- **Custom schemes:** Custom schemes are custom URLs you can create to link to any in-app content. If your ad shows on a mobile device with your app installed and a user clicks the link, it sends people directly to the content in your app.
- **App Links and Universal Links:** These links use your existing HTTP destination URL, such as www.example.com or www.example.com/product_1234. Tracking parameters are allowed for these links.

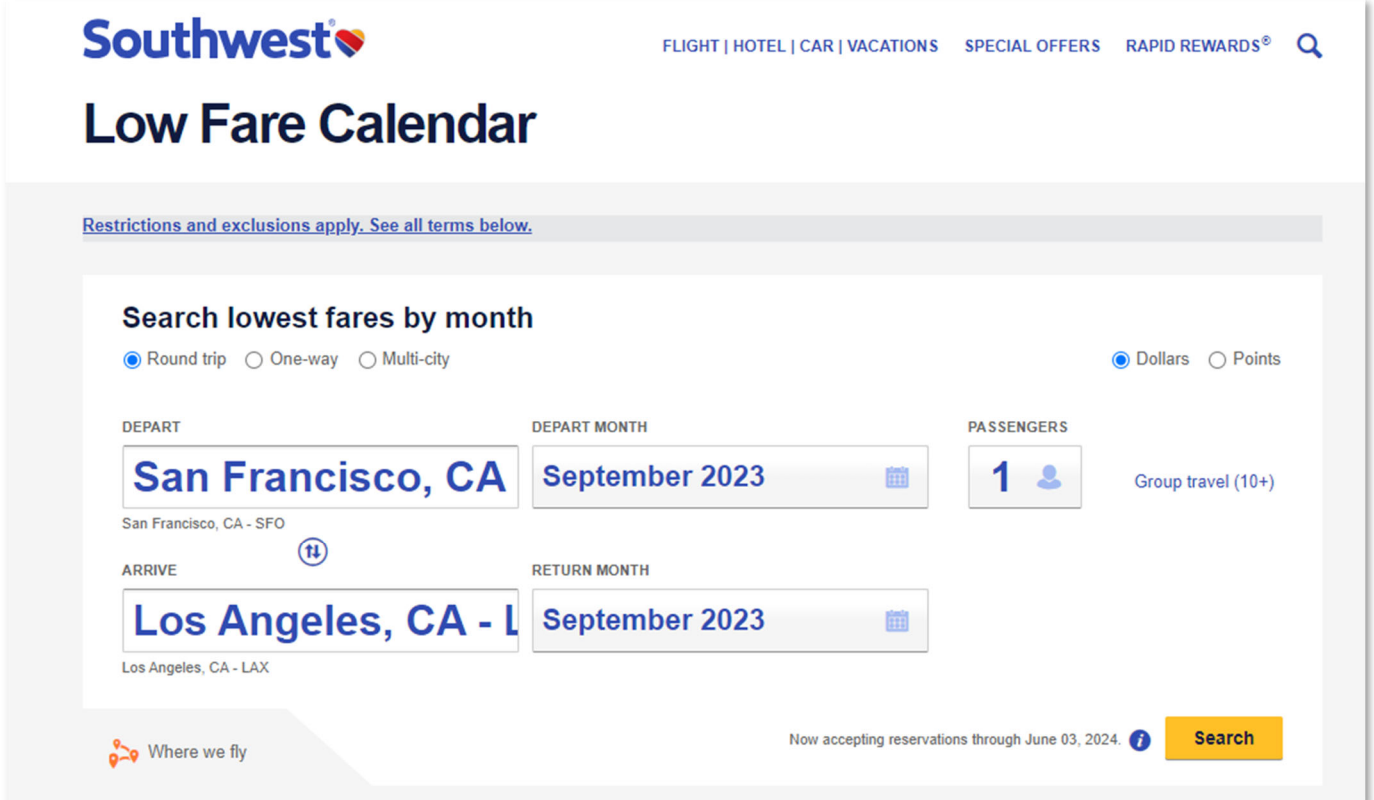
Note: Deep links are not automatically set up when you create your app, and they work differently on iOS and Android.

- [Learn about setting up custom schemes for Android apps](#) 
- [Learn more about Universal Links for iOS apps](#) 
- [Learn about setting up App Links for Android apps](#) 

<https://support.google.com/google-ads/answer/6046977>

	Description	How it works	Which Google Ads products are they compatible with?
App Links (Android)	These links use your existing HTTP destination URLs, such as www.example.com or www.example.com/product_1234 , and take users who have your Android app installed to the in-app content you specify.	Visit our developer website to learn more about App Links for Android apps.	<ul style="list-style-type: none"> • Search • Display • Shopping • App engagement campaigns • App dynamic remarketing campaigns
Universal Links (iOS)	These links use your existing HTTP destination URLs, such as www.example.com or www.example.com/product_1234 , and take users who have your iOS app installed to the in-app content you specify.	Visit the developer website to learn more about Universal Links for iOS apps.	<ul style="list-style-type: none"> • Search • Display • Shopping • App engagement campaigns • App dynamic remarketing campaigns
Custom schemes	Create Custom URIs to link to any in-app content you choose. Note: If the user doesn't have your app installed, custom schemes will lead to an error page.	Visit the developer website to learn more about Custom schemes .	<ul style="list-style-type: none"> • App engagement campaigns • App dynamic remarketing campaigns

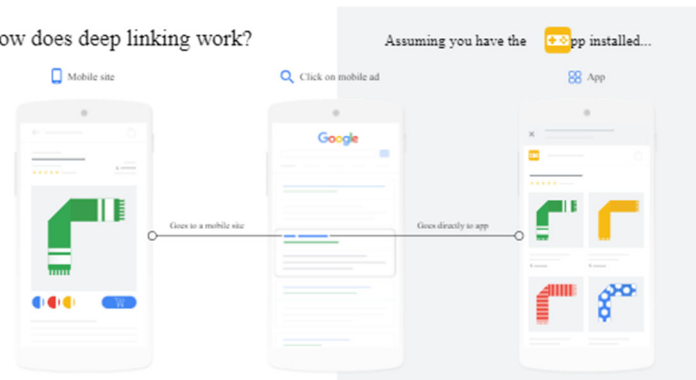
<https://support.google.com/google-ads/answer/10023042>

	 <p>https://www.southwest.com/air/low-fare-calendar/?lfma=LFMA2&mode=OD&originationAirportCode=SFO&destinationAirportCode=LAX&src=SRCH_go_cmp-1025167347_adg-56165908771_ad-595062284103_kwd-300236971871_dev-c_ext- prd-</p>
<p>automatically directing the user device to the second site on the Internet or the second mobile application; and</p>	<p>In response to the interaction with the deep-linked ad, the Accused Instrumentalities automatically direct the user device (e.g., computer, smartphone tablet, etc. using Google search) to the second site on the Internet or the second mobile application (e.g., the site or application associated with the deep-linked ads).</p> <p>As shown below, for example, Google Ads deep links send user devices directly to relevant pages, e.g., “Users click on ads and go directly to your app pages.”</p>

About deep links

Deep links send mobile device users directly to relevant pages in your app rather than your website. Users click on ads and go directly to your app pages. You can use deep links in many Google Ads products, including App campaigns for engagement, App dynamic remarketing, and Search, Shopping, and Display campaigns.

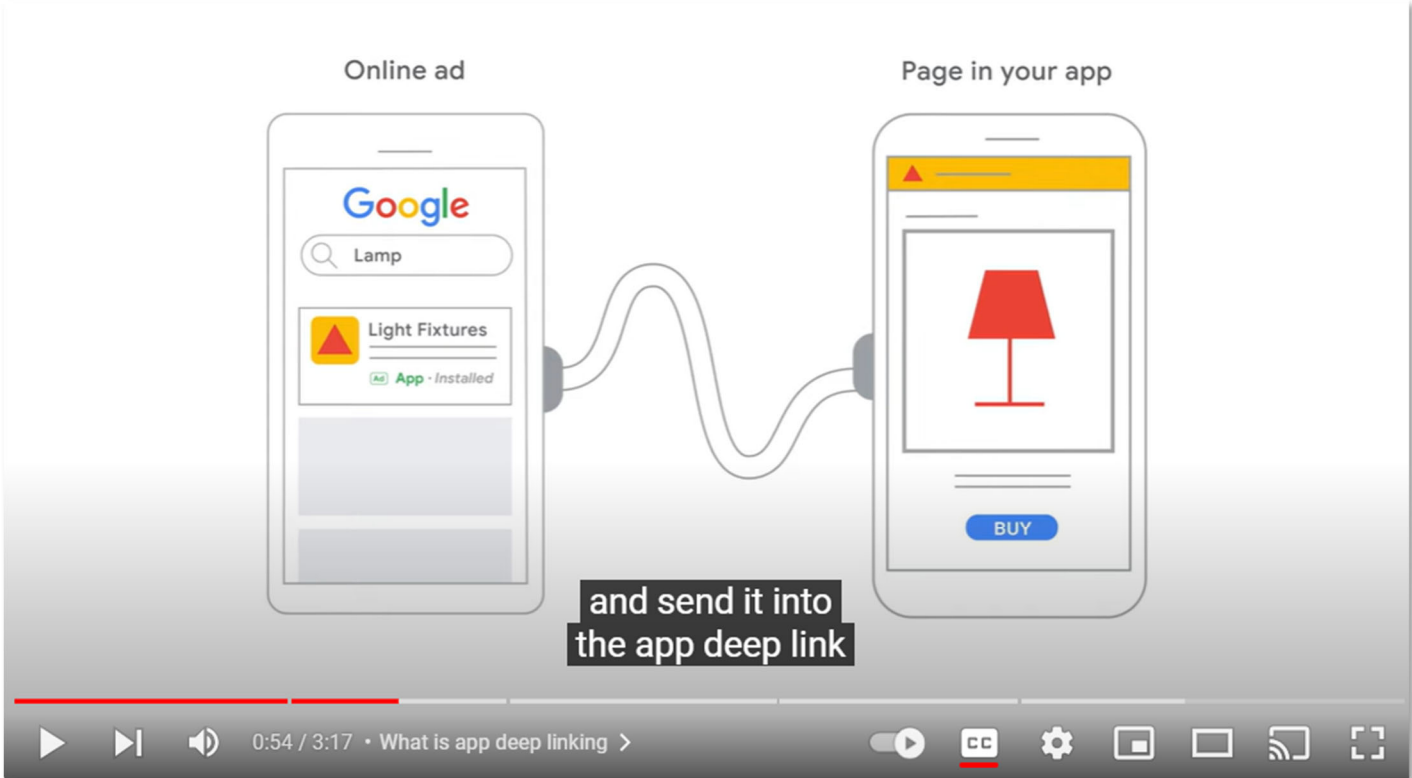
How does deep linking work?



Benefits

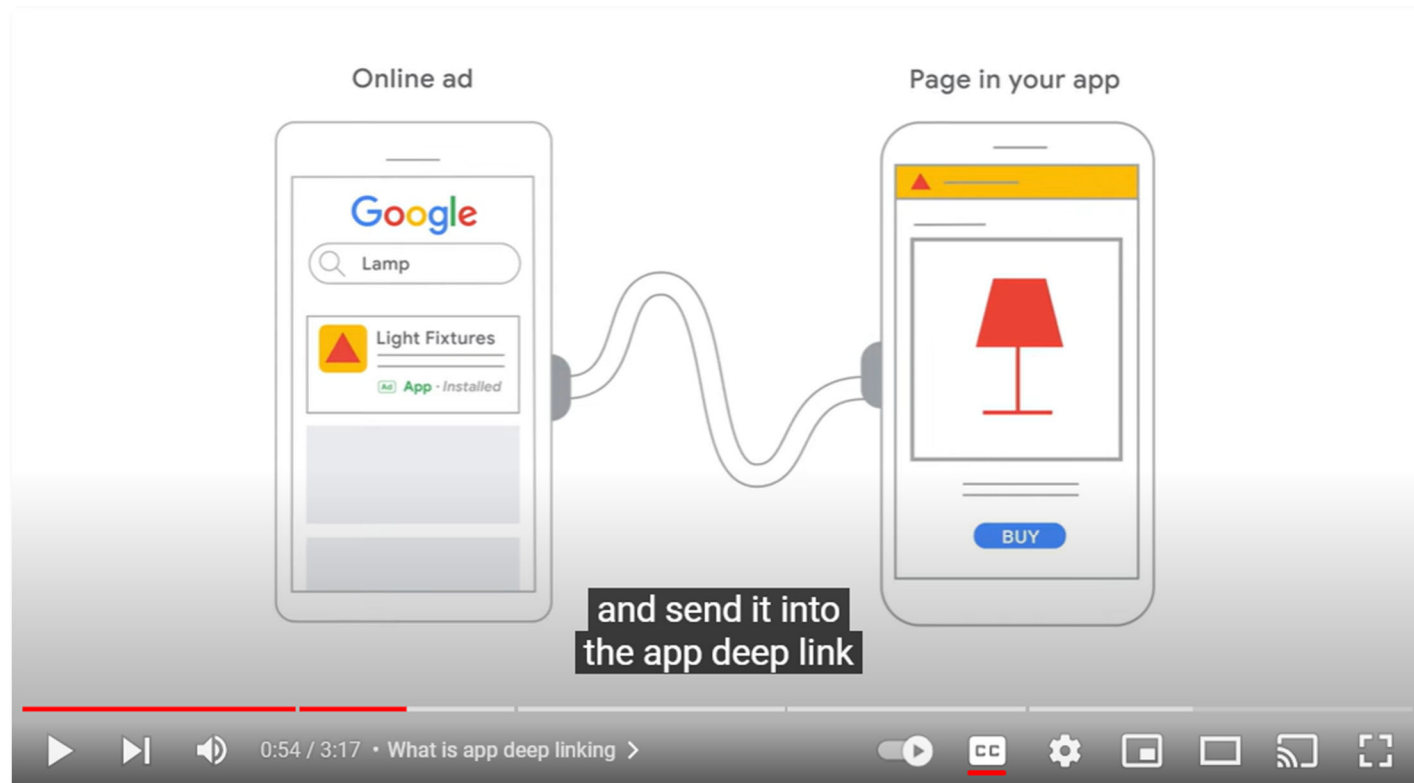
- **Greater security:** App Links and Universal Links give you peace of mind that no other app can use your links. Other companies can't claim your link, so they can't send traffic to their own app (as can be done with custom schemes).
- **Relevant page results:** You can direct customers and potential customers to relevant pages within your app, rather than browser or mobile-web pages. App Links and Universal Links use the same URL as your web links, so if your app can't open, instead of being shown an error page, users will be taken to the mobile site landing page.
- **Seamless user experience:** The more seamless integration for your app users improves user experience, increases conversions, and improves customer loyalty.

<https://support.google.com/google-ads/answer/10023042>

	 <p>https://www.youtube.com/watch?v=60Pk4767aFQ&ab_channel=GoogleAds</p>
<p>passing the values corresponding to the first set of programming variables to the second set of programming variables such that one or more fields</p>	<p>In response to the interaction with the deep-linked ad, the Accused Instrumentalities pass the values corresponding to the first set of programming variables (e.g., values discussed above) to the second set of programming variables (e.g., redirected webpage or app corresponding to the deep link ad) such that one or more fields corresponding to the second set of programming variables of the second site on the Internet or the second mobile application are explicitly or implicitly pre-populated with the values extracted through the first site on the Internet or the first mobile application (e.g., the fields associated with the field identifies are pre-populated using the passed values).</p> <p>As shown below, for example, when the ad is clicked by a user clicked by the user, the values are extracted from</p>

corresponding to the second set of programming variables of the second site on the Internet or the second mobile application are explicitly or implicitly pre-populated with the values extracted through the first site on the Internet or the first mobile application.

the Google search page and a URL including values and other site information directs the device to the second page with the programming variables pre-populated with the values. As shown below, for example, the values are pre-populated (at least implicitly) in the image field associated with the programming variables associated with that field.



https://www.youtube.com/watch?v=60Pk4767aFQ&ab_channel=GoogleAds

As another example, the values (e.g., “sfo” and “lax” are passed and pre-populated in the programming variables shown below).



FLIGHT | HOTEL | CAR | VACATIONS SPECIAL OFFERS RAPID REWARDS®



Low Fare Calendar

[Restrictions and exclusions apply. See all terms below.](#)

Search lowest fares by month

☒ Round trip ☐ One-way ☐ Multi-city

☒ Dollars ☐ Points

DEPART

San Francisco, CA

San Francisco, CA - SFO

DEPART MONTH

September 2023

PASSENGERS

1

Group travel (10+)

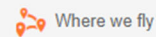
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RETURN MONTH

September 2023



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